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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,991	05/31/2005	Hui Chen	Q88206	1010
23373	7590	09/25/2007		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER HSIEH, BRANDON	
			ART UNIT	PAPER NUMBER
			2128	
			MAIL DATE	DELIVERY MODE
			09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/536,991

Applicant(s)

CHEN ET AL.

Examiner

Brandon Hsieh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/31/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

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(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

3. Claims 2-6 are objected to because of the following informalities: "An integrated design system" should be "the integrated design system". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (hereafter "APA") in view of Sayers ("Vehicle Models for RTS Applications", 1998, Mechanical Simulation Corporation).**

Consider claim 1, APA discloses an integrated design system of an electric power steering apparatus in which a steering assisting force is given to a steering mechanism based on a current control value calculated from a motor current value detected by a motor current detection

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means, and a steering auxiliary command value calculated by a calculation means based on a steering torque and a vehicle speed (**specification, pages 1-2, background technique**), comprising:

a simulation controller (**page 4, line 6, simulator**) for carrying out integrated simulation of said electric power steering apparatus (**Page 4, HIL test or bench simulator corresponds to “simulation of electric power steering apparatus”**).

an analysis tool of control system (**page 5, Matlab**), an analysis tool of motor electromagnetic field (**page 5, JMAG**) and an analysis tool of mechanism of vehicle (**page 6, ADAMS**).

However, APA fails to disclose an interface between a simulation controller and analysis tools.

Sayers discloses a PC as an interface between electronic control unit and vehicle simulation programs (**page 2, FIG. 3, where the program is stored in the PC connected to ECU through interface hardware, 2.1 Type: A ECU Hardware in the Loop where the simulation is performed**).

They are analogous art because they both are related to vehicle simulation.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to modify the teaching of APA such that to further a interface for connecting a simulation controller and an analysis tools.

A person with ordinary skill in the art would have been motivated to make the modification to APA, because Sayers teaches that RTS test packages can be more widely used when using low cost of simulation software in PC (**page 6, 6. conclusion**).

Consider claim 2, APA and Sayers discloses an integrated design system of an electric power steering apparatus according to claim 1, wherein said simulation controller controls and manages entire sequence by calling sub-routines (**Page 4, HIL test or bench simulator corresponds to “simulation of electric power steering apparatus”**) through said interface (Sayers, see rejections above).

Consider claim 3, APA discloses an integrated design system of an electric power steering apparatus according to claim 1, wherein said simulation controller has a maneuver, a simulation, a data to be produced, and a function for storing a result in a readable common file (**Page 4, HIL test or bench simulator, Page 4, third paragraph, “file” corresponds to performing “a maneuver, a simulation, a data to be produced, and a function for storing a result in a readable common file”**).

Consider claim 4, APA discloses an integrated design system of an electric power steering apparatus according to claim 1, wherein said interface converts formats of said analysis tool of control system, said analysis tool of motor electromagnetic field and said analysis tool of mechanism of vehicle into a same format (**page 6, lines 1-3, the data is exchanged between JMAG and Matlab, S-funtion is the common format between tools**).

Consider claim 5, APA discloses an integrated design system of an electric power steering apparatus according to claim 4, wherein said interface converts files of said analysis tools into a readable common file, and produces an index array which explains a conversion sequence (**page 6, lines 1-3, the data (file) is exchanged between JMAG and Matlab, S-**

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funtion is the common format between tools, data from tools are converted into S-function language).

Consider claim 6, APA discloses an integrated design system of an electric power steering apparatus according to claim 4, wherein said interface has functions of standardization of data definitions, standardization of formats, and high speed communication of data (page 6, lines 1-3, the data is exchanged between JMAG and Matlab, S-funtion is the common format between tools (same standard); Page 4, third paragraph, using email to send file).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hsieh whose telephone number is (571)-270-1320. The examiner can normally be reached on Monday-Friday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571)-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Brandon Hsieh
Examiner
Art Unit 2128

BH


KAMINI SHAH
SUPERVISORY PATENT EXAMINER